

**Title:** Secure transmission of digital data over disturbance channels - immediately r transmitting digital data on recognition of insufficient signal strength estimated by receiver

**Patent Number:** DE4241618

**Publication date:** 1994-06-16


**Inventor(s):** DIPPOLD MICHAEL DR (DE); CYGAN DANIEL (DE)

**Applicant(s):** DEUTSCHE FORSCH LUFT RAUMFAHRT (DE)

**Application Number:** DE924241618 19921210

**Priority Number(s):** DE924241618 19921210

**IPC Classification:** H04L1/00

**Requested Patent:**  DE4241618

**Equivalents:**

---

### Abstract

---

The method involves using a transmitter, installed e.g. in a vehicle, having a baseband section incorporating a buffer (111) for incoming data from an encoder (110), controlled by a redundancy decision unit (122) operating on an estimate (121) of a signal received (120) over the channel. A signature sequence (bk) is generated (113) for multiplication (114) by the readout from the buffer before modulation (112) at intermediate frequency.

In the receiver, accumulated signal energy is estimated and a decision control interrupts the signature sequence and triggers an integrate-and-dump unit using clock recovery.

USE/ADVANTAGE - Direct Spread Spectrum transmission. No acknowledgement channel is necessary. Throughput increased by transmission of only instantaneously required redundancy, and buffer memories need not accommodate more than one data packet.